

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1 1. (Currently Amended) A method for memory failure recovery in a computer, comprising:
2 maintaining a predetermined number of duplicate and primary processes in the computer;
3 keeping the processes in synchronization;
4 managing the processes so that a single process image is presented to an external
5 environment;
6 detecting a computer ~~system~~ exception which affects one of the processes; and
7 terminating the affected process.
- 1 2. (Original) The method of claim 1 wherein the detecting element includes detecting a
2 memory failure.
- 1 3. (Currently Amended) The method of claim 1 further comprising:
2 allocating a new memory space in memory hardware in the computer to each of the
3 duplicate processes, which is separate from a memory space in the memory hardware allocated
4 to the primary process.
- 1 4. (Original) The method of claim 1 wherein the maintaining element includes:
2 identifying a primary process;
3 monitoring a fault-tolerance value corresponding to the primary process; and
4 setting a number of duplicate processes equal to the fault-tolerance value.
- 1 5. (Currently Amended) The method of claim 4 further comprising ~~wherein the monitoring~~
2 ~~element includes~~ assigning a predetermined fault-tolerance value to a primary process.

1 6. (Currently Amended) The method of claim 4 further comprising ~~wherein the monitoring~~
2 ~~element includes~~ dynamically modifying the fault-tolerance value of the primary process, in
3 response to a computer command.

1 7. (Currently Amended) The method of claim 4 wherein the setting element includes
2 adding [[a]] one or more new duplicate processes, if the number of duplicate processes is less
3 than the fault-tolerance value.

1 8. (Original) The method of claim 4 wherein the setting element includes deleting a
2 duplicate process, if the number of duplicate processes is more than the fault-tolerance value.

1 9. (Original) The method of claim 1 wherein the keeping element includes synchronizing
2 the processes upon receipt of data from an external environment.

1 10. (Original) The method of claim 1 wherein the keeping element includes synchronizing
2 the processes upon receipt of signals from an external environment.

1 11. (Original) The method of claim 1 wherein the keeping element includes synchronizing
2 the processes upon transmission by one of the processes to an external environment.

1 12. (Original) The method of claim 1 wherein the managing element includes permitting
2 only one of the processes to transmit to an external environment.

1 13. (Original) The method of claim 1 wherein the managing element includes permitting
2 only one of the processes to perform a system call to an external environment.

1 14. (Original) The method of claim 1 wherein the managing element includes permitting
2 only one of the processes to perform a library call to an external environment.

1 15. (Original) A method for memory failure recovery, comprising:
2 maintaining a predetermined number of duplicate and primary processes;
3 keeping the processes in synchronization;
4 managing the processes so that a single process image is presented to an external
5 environment;
6 detecting a computer system exception which affects one of the processes; and
7 terminating the affected process;
8 wherein the maintaining element includes,
9 identifying a primary process;
10 monitoring a fault-tolerance value corresponding to the primary process; and
11 setting a number of duplicate processes equal to the fault-tolerance value; and
12 wherein the managing element includes,
13 permitting only one of the processes to perform a system call to an external
14 environment.

1 16. (Cancelled)

1 17. (Currently Amended) A computer-usable medium embodying computer program code
2 for commanding a computer to perform memory failure recovery comprising:
3 maintaining a predetermined number of duplicate and primary processes in the computer;
4 keeping the processes in synchronization;
5 managing the processes so that a single process image is presented to an external
6 environment;
7 detecting a computer system exception which affects one of the processes; and
8 terminating the affected process.

1 18. (Original) The medium of claim 17 wherein the detecting element includes detecting a
2 memory failure.

1 19. (Currently Amended) The medium of claim 17 further comprising:
2 allocating a new memory space in memory hardware in the computer to each of the
3 duplicate processes, which is separate from a memory space in the memory hardware allocated
4 to the primary process.

1 20. (Original) The medium of claim 17 wherein the maintaining element includes:
2 identifying a primary process;
3 monitoring a fault-tolerance value corresponding to the primary process; and
4 setting a number of duplicate processes equal to the fault-tolerance value.

1 21. (Currently Amended) The medium of claim ~~[[1]]~~ 17 wherein the managing element
2 includes permitting only one of the processes to transmit to an external environment.

1 22. (Currently Amended) A system for memory failure recovery in a computer, comprising:
2 means for maintaining a predetermined number of duplicate and primary processes in the
3 computer;
4 means for keeping the processes in synchronization;
5 means for managing the processes so that a single process image is presented to an
6 external environment;
7 means for detecting a computer ~~system~~ exception which affects one of the processes; and
8 means for terminating the affected process.

1 23. (Original) A system for memory failure recovery, comprising:
2 a primary process memory space hosting a primary process;
3 a duplicate process memory space hosting a duplicate process corresponding to the
4 primary process;
5 a synchronization buffer for keeping the duplicate process in synchronization with the
6 primary process;
7 a processor for generating an exception signal in response to detection of a memory
8 failure condition which affects the primary process; and
9 an operating system for receiving the exception signal, terminating the affected primary
10 process, and maintaining a predetermined number of primary and duplicate processes.

1 24. (Currently Amended) The system of claim 23, further comprising:
2 a buffer controller for permitting the processes to receive communications from an
3 external environment while permitting only one of the processes to transmit to the external
4 environment.

1 25. (Original) The system of claim 23, wherein the exception signal is a machine check abort
2 signal.

1 26. (New) The method of claim 1, further comprising:
2 the processes communicating, through a synchronization buffer, with an external
3 environment,
4 wherein keeping the processes in synchronization is based on interaction between the
5 processes and the external environment through the synchronization buffer.

1 27. (New) The method of claim 15, wherein keeping the processes in synchronization is
2 based on data or signals received from the external environment, the external environment
3 including computer functionality outside the processes.

- 1 28. (New) The method of claim 15, wherein the predetermined number of duplicate and
2 primary processes are maintained in a computer.
- 1 29. (New) The medium of claim 17, wherein the computer program code is for commanding
2 the computer to further perform:
3 enabling the processes to communicate, through a synchronization buffer, with an
4 external environment,
5 wherein keeping the processes in synchronization is based on interaction between the
6 processes and the external environment through the synchronization buffer.
- 1 30. (New) The system of claim 23, wherein the primary process, duplicate process,
2 synchronization buffer, processor, and operating system are part of a computer.